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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,674	02/15/2001	Karen W. Shannon	10971464-3	3167

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EXAMINER

MAHATAN, CHANNING

ART UNIT PAPER NUMBER

1631

15

DATE MAILED: 07/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/784,674

Applicant(s)

SHANNON ET AL.

Examiner

Channing S. Mahatan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 and 98-101 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 and 98-101 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

SUPPLEMENTAL ACTION

Applicants' attorney, Theodore J. Leitereg, was notified on 17 June 2003, of the supplemental action necessitated by an additional rejection and that the period for reply will restart from the mailing of this supplemental action. This action contains additional rejections for claims 1-40 and 98-101 under obviousness-type double patenting and 35 U.S.C. § 103 (a), which was absent from the previous office action.

APPLICANTS' ARGUMENTS

Applicants' arguments in Paper No. 13, filed 24 February 2003, have been fully considered but they are not deemed to be persuasive for the reasons set forth below. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

CLAIMS UNDER EXAMINATION

Claims herein under examination are claims 1-40 and 98-101. Claims 41-97 have been cancelled as indicated in Paper No. 13, filed 24 February 2003.

Obviousness-Type Double Patenting

Claims 1-40, 98, and 99 remain rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-40, 97, and 98 of U.S. Patent No. 6,251,588 as indicated in Paper No. 12, mailed 02 December 2002, for reasons of record. No terminal disclaimer has been filed.

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Claims 1-40, and 98-101 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-40, 97, and 98 of U.S. Patent No. 6,251,588 as indicated in Paper No. 12, mailed 02 December 2002 taken in view of Southern (U.S. Patent No. 5,700,637).

Claims 1-40 and 98-101 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-40, 97, and 98 of U.S. Patent No. 6,251,588 as indicated in Paper No. 12, mailed 02 December 2002, taken in view of U.S. Patent No. 5,700,637. Although the conflicting claims are not identical, they are not patentably distinct from each other because U.S. Patent No. 6,251,588 discloses the following:

“For a discussion of oligonucleotide arrays, see, e.g. U.S. Patent No. 5,700,637 (E. Southern) and U.S. Patent No. 5,667, 667 (E. Southern), the relevant disclosures of which are incorporated herein by reference.” (page 10, lines 4-7 of the Specification).

U.S. Patent No. 5, 700,637 describes an apparatus and method for analyzing polynucleotide sequences and a method of generating oligonucleotide arrays, wherein a computer (i.e. electronically transfer data) is utilized to analyze and control the system (Abstract; Columns 6-9; Example 5; and claim 2). Thus, it would have been obvious to someone of ordinary skill in the art at the time of the invention to electronically transfer identified sequences(i.e. data) to an oligonucleotide array manufacturing system (i.e. computer) since U.S. Patent No. 6,521, 588 references oligonucleotide arrays of U.S. Patent No. 5,700,637.

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Claims Rejected Under 35 U.S.C. § 102

The rejection of claims 1-3, 5-10, 15, 17-22, 98, and 100 under 35 U.S.C. § 102(b) as being anticipated by Hyndman et al. as indicated in Paper No. 12, mailed 02 December 2002, are maintained for reasons of record. Further, clarification of the rejection is provided below with regard to applicants' argument(s).

Applicants' argue in Paper No. 13, filed 24 February 2003, that Hyndman et al. "does not disclose the step of identifying oligonucleotides in a subset of oligonucleotides that are clustered along a region of the nucleotide sequence that is hybridizable to the target sequence".

As indicated in Paper No. 12, mailed 02 December 2002, Hyndman et al. describes the application of HYBsimulator™ to identify common/census probes (i.e. clustered along a region; instant claim 1) to all the targets of interest (same gene in related organism or related genes in the same organism or unknown varieties of a gene family) (page 1094, column 1, lines 20-39 Common or Consensus Probes section). Thus, Hyndman et al. clearly anticipates the claimed invention.

Claims Rejected Under 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-10, 15, 17-22, and 98-101 rejected under 35 U.S.C. § 103(a) as being unpatentable over Hyndman et al. taken in view of Southern (U.S. Patent Number 5,700,637).

It should be noted applicants originally filed disclosure indicates the following:

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1) "For a discussion of oligonucleotide arrays, see, e.g. U.S. Patent No. 5,700, 637 (E. Southern) and U.S. Patent No. 5,667, 667 (E. Southern), the relevant disclosures of which are incorporated herein by reference." (page 10, lines 4-7 of the Specification); and 2) "Binding of oligonucleotides to a support or surface may be accomplished by well-known techniques, commonly available in the literature." (page 27, lines 18-20 of the Specification).

Hyndman et al. is applied as indicated in the 35 U.S.C. § 102 (b) rejection (above and in Paper No. 12, mailed 02 December 2002).

Southern describes an apparatus and method for analyzing polynucleotide sequences and a method of generating oligonucleotide arrays, wherein a computer (i.e. electronically transfer data) is utilized to analyze and control the system (Abstract; Columns 6-9; Example 5; and claim 2).

Thus, it would have been obvious to someone of ordinary skill in the art at the time of the invention to practice Hyndman et al. with Southern, electronically transfer identified sequences (i.e. data) to an oligonucleotide array manufacturing system (i.e. computer) since Hyndman et al. indicates the application of HYBsimulator to "design optimally specific DNA probes for dot blots, Southern blots, Northern blots, etc." (i.e. oligonucleotide arrayers) (page 1093, column 2, beginning on line 25 to page 1094, column 1, line 19).

No Claims Are Allowed.

EXAMINER INFORMATION

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located

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in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 C.F.R. § 1.6(d)). The CM1 Fax Center number is either (703) 308-4242 or (703) 305-3014.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Channing S. Mahatan whose telephone number is (703) 308-2380. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Woodward, Ph.D., can be reached on (703) 308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instruments Examiner, Tina M. Plunkett, whose telephone number is (703) 305-3524 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

Date: *June 27, 2003*

Examiner Initials: *CSM*

Marianne P. Allen
MARIANNE P. ALLEN
PRIMARY EXAMINER
GROUP 1800
4/1631